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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,538	01/02/2002	Valerie Girardon	Q67665	5603

7590

07/09/2003

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EXAMINER

LIN, TINA M

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,538

Applicant(s)

GIRARDON ET AL.

Examiner

Tina M Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The disclosure is objected to because of the following informalities: In the section "Summary of the Invention", it is unclear where the formula $\alpha = -(dn_{eff}/dT)/n_{eff}$ originated from or how it was derived. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, it is unclear where the equation, $\alpha = -(dn_{eff}/dT)/n_{eff}$, originated from. There is no support in the specification as to where the equation originated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,067,392 to Wakami et al. Wakami et al. discloses a diffraction fiber grating region on an optical fiber. Further, Wakami et al. discloses a diffracting grating region to be in contact with a polymer material with a negative thermal expansion coefficient. (Abstract and Column 2) but Wakami et al. fails to disclose the fiber to consist of essentially silica. However, Wakami et

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al. does disclose the optical fiber to consist of glass. Additionally, since the glass material used in optical fibers is commonly silica, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have an optical fiber made essentially of silica.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,067,392 to Wakami et al. as applied to claims 1 and 2 above, and in further view of U.S. Patent 5,851,427 to Kelly. Wakami et al. discloses all discussed above, but fails to specifically disclose that the polymeric material is a crosslinked polymeric material or a monomeric and/or oligomeric precursor material with an anisotropic behavior and that the polymeric material exhibits a negative linear coefficient along the fiber axis. However, Kelly discloses a crosslinked polymeric material for use in liquid crystal materials for waveguides and filters, such a grating filters. Furthermore, Kelly also discloses it is known in the art to use oligomerizable liquid crystals with the optical characteristic of anisotropy in waveguides and filters. And since Wakami et al. discloses a liquid crystal polymer in general and does not specify the type of liquid crystal polymer, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have used a crosslinked polymeric material or a monomeric and/or oligomeric precursor material with an anisotropic behavior for the purpose of coating an optical fiber. Furthermore, from the graph in Figure 4, it can be seen that the ambient temperature and the wavelengths are consistent in the present invention. Therefore, since the temperature is a constant and linear, it would have been obvious at the time the invention was made to a person having ordinary skill in the art for the negative coefficient is linear as well.

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Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,067,392 to Wakami et al. as applied to claim 1 above, and in further view of U.S. Patent 5,761,267 to Matsumoto. Wakami et al. discloses forming a diffraction grating area along the optical axis of an optical fiber, bringing in contact a material that will be in contact with the grating area and coat the fiber and then curing the layer of material by UV radiation. But Wakami et al. fails to specifically disclose that the material is a monomeric and/or oligomeric material cured by temperature, electron beam or gamma radiation. However, Matsumoto discloses that a polymer for coating an optical fiber in communication systems where the polymer material can be a monomer or oligomer material. Furthermore, Matsumoto discloses that the curing of the material can be accomplished by temperature, electron beam or gamma radiation as well as UV radiation. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have a material that is a monomeric and/or oligomeric material cured by either temperature, electron beam, UV or gamma radiation.

The documents submitted by applicant in the Information Disclosure Statement have been considered and made of record. Note attached copy of form PTO-1449.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References C and D discuss temperature compensated fibers with grating areas.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out


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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina M Lin whose telephone number is (703) 305-1959. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TML 
June 25, 2003